

# Work Order ID 96434

**\*96434\***

Page 1

January-28-13 11:51:36 AM

Item ID: D4155-1 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Bar  
 Start Date: 1/24/13 Start Qty: 10.00 **\*10\*** Cust Item ID:  
 Required Date: 2/15/13 Req'd Qty: 10.00 **\*10\*** Customer:  
 Reference:

Approvals: Process Plan: MLJ Date: 13-01-29 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
<b>Draw Nbr</b>	<b>Revision Nbr</b>								
D4155	D								
100		0.00							
<b>*100*</b>									
Cold Saw	Memo	0.00							
Hyd Mech	Cut blanks at 92.00" (EXTRA MATERIAL WILL BE CUT ON ASSEMBLY D4154-041)								
110		0.00							
<b>*110*</b>									
HAAS 1	Memo	0.00							
HAAS CNC vertical machine #1	1-Mill as per folio FB048 & dwg D4155, FOLIO REV: <u>AA</u> DWG REV: <u>D</u> 2-Deburr as required								

*OK 13/02/27*

*10*

*OK 13/03/04*

*10*

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  <div style="display: flex; justify-content: space-around;"> <div>             Rework <input type="checkbox"/>              Scrap <input type="checkbox"/>              Use-as-is <input type="checkbox"/>              Work Order Update <input type="checkbox"/> </div> <div>             Skid-tube <input type="checkbox"/>              Machining <input type="checkbox"/>              Thermoforming <input type="checkbox"/>              Large Fab <input type="checkbox"/> </div> <div>             Crosstube <input type="checkbox"/>              Small Fab <input type="checkbox"/>              Finishing <input type="checkbox"/>              Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/>              Prod. Eng. Coord. <input type="checkbox"/>              Rec/Store/Packaging <input type="checkbox"/>              Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/>              Quality <input type="checkbox"/>              Other <input type="checkbox"/> </div> </div>		<b>AGAINST DEPARTMENT/PROCESS</b>					
<b>Root Cause</b>	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
<b>FAULT CATEGORY</b>											
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock/Pulled  <input type="checkbox"/> Other		

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Page 2

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Item ID: D4155-1 Accept **\*N900040100\*** Setup Start **\*NS1\***  
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 Item Name: Bar  
 Start Date: 1/24/13 Start Qty: 10.00 **\*10\*** Cust Item ID:  
 Required Date: 2/15/13 Req'd Qty: 10.00 **\*10\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 <b>*120*</b> QC Quality Control	QC2- Inspect parts off machine FAI/FAIB  Memo	0.00  0.00							
			on 13/03/04			10			
130 <b>*130*</b> QC Quality Control	QC8- Inspect parts - second check  Memo	0.00  0.00							
			13-3-4			10			DAS 13 2-89
140 <b>*140*</b> Packaging Packaging	Identify as per dwg & Stock Location: <u>WA001</u>  Memo	0.00  0.00							
			⑩ ME						13-03-04

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  <div style="display: flex; justify-content: space-around;"> <div style="text-align: right;">             Rework <input type="checkbox"/>              Scrap <input type="checkbox"/>              Use-as-is <input type="checkbox"/>              Work Order Update <input type="checkbox"/> </div> <div style="text-align: right;">             Skid-tube <input type="checkbox"/>              Machining <input type="checkbox"/>              Thermoforming <input type="checkbox"/>              Large Fab <input type="checkbox"/> </div> <div style="text-align: right;">             Crosstube <input type="checkbox"/>              Small Fab <input type="checkbox"/>              Finishing <input type="checkbox"/>              Composite <input type="checkbox"/> </div> <div style="text-align: right;">             Water Jet <input type="checkbox"/>              Prod. Eng. Coord. <input type="checkbox"/>              Rec/Store/Packaging <input type="checkbox"/>              Supplier <input type="checkbox"/> </div> <div style="text-align: right;">             Engineering <input type="checkbox"/>              Quality <input type="checkbox"/>              Other <input type="checkbox"/> </div> </div>								
<b>Root Cause</b>	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector			
Doc/Data												
Equip/Tooling												
Operator												
Material												
Setup												
Other												
Process												
Supplier												
Training												
Unapproved												
<b>FAULT CATEGORY</b>												
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other			

# Work Order ID 96434

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Page 3

January-28-13 11:51:36 AM

Item ID: D4155-1

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Bar

Start Date: 1/24/13 Start Qty: 10.00

**\*10\***

Cust Item ID:

Required Date: 2/15/13 Req'd Qty: 10.00

**\*10\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

150

QC21- Final Inspection - Work Order Release

0.00

**\*150\***

QC

Memo

0.00

Quality Control

ML5 13-03-25  
ML5 13-03-25

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  <div style="display: flex; justify-content: space-around;"> <div>             Rework <input type="checkbox"/>              Scrap <input type="checkbox"/>              Use-as-is <input type="checkbox"/>              Work Order Update <input type="checkbox"/> </div> <div>             Skid-tube <input type="checkbox"/>              Machining <input type="checkbox"/>              Thermoforming <input type="checkbox"/>              Large Fab <input type="checkbox"/> </div> <div>             Crosstube <input type="checkbox"/>              Small Fab <input type="checkbox"/>              Finishing <input type="checkbox"/>              Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/>              Prod. Eng. Coord. <input type="checkbox"/>              Rec/Store/Packaging <input type="checkbox"/>              Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/>              Quality <input type="checkbox"/>              Other <input type="checkbox"/> </div> </div>	
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Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other
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# Picklist Print

January-28-13 11:51:36 AM

Page 1

Work Order ID: 96434

Parent Item: D4155-1

Parent Item Name: Bar

Start Date: 1/24/13

Required Date: 2/15/13

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP Rev:A 10.08.03 new issue DD verf:EC  
revB DD verf:EC

IPP Rev:B 11.04.14 as per dwg

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304B0.250x0.500 304 BAR .250 x .500		Purchased	No			100	f	238.2140	7.6333	80.350526			

Location

Loc Qty

Loc Code

MAT049

238.214

123902

238.214

8.015 ~~7.633~~

M124579 x

72.345

SWR 13/03/04

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>
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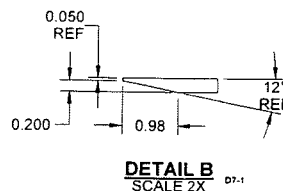
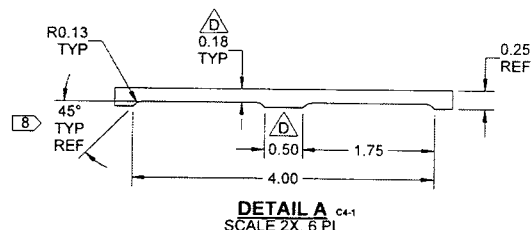
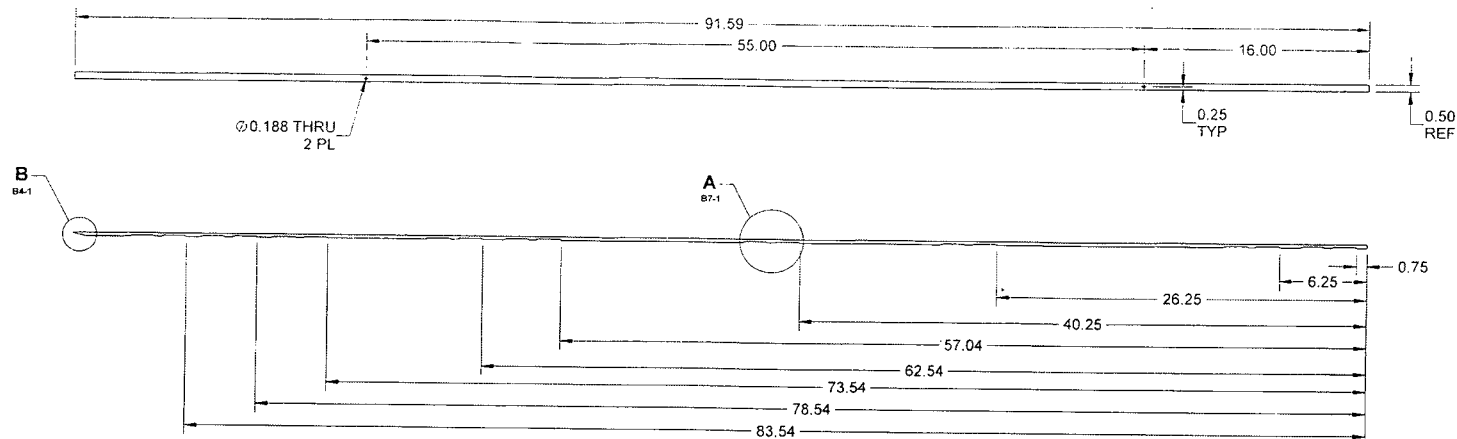
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

**FAULT CATEGORY**

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other
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# **D4155-1 BAR**

UNCONTROLLED COPY  
SUBJECT TO CHANGE  
WITHOUT NOTICE

**RELEASED**  
R 2012-09-04

96-434 MLS  
13-01-29

## **NOTES:**

- 1) MATERIAL : AISI 304/316 STAINLESS STEEL BAR, 0.25 THICK X 0.50 WIDE PER ASTM A276 OR ASTM A240  
REF. DART SPEC. M304B0.250X0.500
- 2) FINISH : NONE
- 3) TOLERANCES : PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS : INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES : 0.005 TO 0.010 MAX
- 6) IDENTIFICATION : NONE
- 7) WEIGHT : 2.99 lbs
- 8) ANGLE TO BE DETERMINED BY AVAILABLE TOOLING.

D	REDESIGNED WITH SHORTER CUTOUTS. NOTE 8 ADDED. (PAR 12-213); 0.18 WAS 0.13	AJS	12.08.07
C	REMOVED TOOLING HOLE; ADD CUT OUT PROFILE (ZN C6-1 & C7-1); 2 DEC TOLERANCE (D1-1, D2-1)	RF	12.02.21
B	CHANGED MANUFACTURING PROCESS; MATERIAL WAS 0.50 THICK (A6-1); 0.25 REF WAS 0.20 (B6-1); 0.13 WAS 0.08 (B7-1)	MB	11.04.05
A	NEW ISSUE	SC	10.07.22
REV.	DESCRIPTION	BY	DATE
DESIGN	SC	<b>DART AEROSPACE USA, INC.</b> PORT HADLOCK, WA	
DRAWN	AJS		
CHECKED	LP	DRAWING NO.	REV. D
MFG. APPR.	DS	D4155	SHEET 1 OF 1
APPROVED	LP	TITLE	SCALE
DE APPR.	TH	BAR	NTS
DATE	12.08.07	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL. ANY DISSEMINATION OF THIS DOCUMENT WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

